

WHAT IS CLAIMED:

- Sub A1
1. A laminable photochromic element comprising a photochromic layer comprising a polyester urethane binder and a photochromic compound, the photochromic layer adhered to one surface of a polymeric layer comprising a polycarbonate resin or a polysulfone resin.
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2. The laminable photochromic element of claim 1 wherein the photochromic layer is sandwiched between two polymeric layers, each of the polymeric layers comprising a polymer selected from the group consisting of polycarbonate resin and polysulfone resins.
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- Sub A2
3. The laminable photochromic element of claim 2 consisting of three layers comprising the photochromic layer and the two sandwiching layers comprising a polymer selected from the group consisting of polycarbonate resin and polysulfone resins.
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4. The laminable photochromic element of claim 2 fused to a polymeric surface.
5. The laminable photochromic element of claim 2 adhesively secured to a polymeric surface.
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6. The laminable photochromic element of claim 4 wherein the polymeric surface comprises an ophthalmic lens.
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7. The laminable photochromic element of claim 5 wherein the polymeric surface comprises an ophthalmic lens.
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8. The laminable photochromic element of claim 1 wherein the polymeric layer comprises a polycarbonate resin or a polysulfone resin with a first surface and a second surface, the polyester urethane is contiguous to the first surface of the

polymeric layer and to a functional layer selected from the group consisting of scratch resistant layers, anti-fogging layers, tint layers, and hydrophobic layers.

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9. The laminable photochromic element of claim 2 wherein the polymeric layer comprises a polycarbonate resin or a polysulfone resin with a first surface and a second surface, the polyester urethane is contiguous to the first surface of the polymeric layer and to a functional layer selected from the group consisting of scratch resistant layers, anti-fogging layers, tint layers, and hydrophobic layers.
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10. The laminable photochromic element of claim 7 wherein the polymeric layer comprising a polycarbonate resin or a polysulfone resin with a first surface and a second surface, the polyester urethane contiguous to the first surface of the polymeric layer and a functional layer selected from the group consisting of scratch resistant layers, anti-fogging layers, tint layers, and hydrophobic layers.
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11. A method of forming a photochromic element according to claim 1 comprising forming a mixture by mixing the photochromic compound with the polyester urethane, forming a dry film of the mixture, then securing the dry film to the polymeric layer.
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12. A method of forming a photochromic element according to claim 2 comprising forming a mixture by mixing the photochromic compound with the polyester urethane, forming a dry film of the mixture, then sandwiching the dry film between the two polymeric layers.
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13. A method of forming a multi-layer polymeric photochromic article comprising securing the laminable article of claim 1 to a polymeric article.
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14. A method of forming a multi-layer polymeric photochromic article comprising laminating a polymeric layer of the laminable article of claim 2 to a polymeric article.

Sub A3
cont.

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15. A method of forming a multi-layer polymeric photochromic article comprising laminating a polymeric layer of the laminable article of claim 3 to a polymeric article.
16. A method of forming a multi-layer polymeric photochromic article comprising laminating a polymeric layer of the laminable article of claim 4 to a polymeric article.
17. A method of forming a multi-layer polymeric photochromic article comprising laminating a polymeric layer of the laminable article of claim 5 to a polymeric article.
18. A method of forming a multi-layer polymeric photochromic lens comprising laminating a polymeric layer of the laminable article of claim 6 to a polymeric article.
19. A method of forming a multi-layer polymeric photochromic lens comprising laminating a polymeric layer of the laminable article of claim 7 to a polymeric article.
20. A method of manufacturing an ophthalmic lens with photochromic properties comprising:
 - providing a photochromic element comprising at least two layers of polymeric material comprising a) a first polymeric layer containing at least 0.05% by weight of photochromic material and b) at least one second polymeric layer comprising a polycarbonate or polysulfone resin;
 - placing said photochromic element within a shaping environment;
 - providing a hardenable composition adjacent to said photochromic element while the photochromic element is within the shaping environment,

and shaping the hardenable polymeric composition within said shaping environment; and

hardening said hardenable polymeric composition within said shaping environment to form the ophthalmic lens.

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21. The method of claim 20 wherein said shaping environment is a mold.

22. The method of claim 21 wherein said mold is an injection molding mold.

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23. The method of claim 22 wherein said photochromic element comprises at least three polymeric layers comprising a) a first polymeric layer comprising a polyester urethane containing at least 0.05% by weight of photochromic material and b) at least a second polymeric layers and a third polymeric layer, with the second and third polymeric layers sandwiching the photochromic layer, each of the second and third polymeric layers comprising polycarbonate resin or polysulfone resin.

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24. The method of claim 21 wherein said photochromic element is pre-shaped to a form that corresponds to a geometry similar to that of the shaping environment and the geometry is other than flat.

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25. The method of claim 22 wherein said photochromic element is pre-shaped to a form that corresponds to a geometry similar to that of the shaping environment and the geometry is other than flat.

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26. The method of claim 23 wherein said photochromic element is pre-shaped to a form that corresponds to a geometry similar to that of the shaping environment and the geometry is other than flat.

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27. The method of claim 20 wherein said second polymeric composition comprises a polycarbonate resin.

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099
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